

METHODS FOR IDENTIFYING A PEPTIDE THAT BINDS A GEOMETRICAL SHAPE

ABSTRACT OF THE DISCLOSURE

Provided herein are methods, such as phage display assays, for bioengineering peptides that bind to geometrically and/or atomically structured molecular surfaces such as, for example, flat surfaces, smooth curved surfaces, as well as surfaces with periodic, random, or fractal atomic configurations. Surface-binding peptides are provided that are identified using the phage-display methods. Furthermore, scanning probe microscopy (SPM) substrates, biosensors, biochips, and electrodes are provided that include the surface-binding peptides.